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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/060,775

02/01/2002

Hoton How

8284

7590

03/24/2004

Hoton How
262 Clifton Street
Belmont, MA 02478

EXAMINER

SWARTHOUT, BRENT

ART UNIT

PAPER NUMBER

2636

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/060,775

Applicant(s)

HOW, HOTON

Examiner

Brent A Swarthout

Art Unit

2636

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

a. Claims 1,2 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parker et al.

Parker teaches desirability of using electronic track 18 on road 12, installing electronic transducers 20 on vehicle 10 for detecting track 18, wherein information from track 18 is used to guide vehicle along road and also additional information from track is provided to a driver (col.3, lines 35-55).

Choosing to use plural track elements would have been obvious to one of ordinary skill in the art, merely depending on whether marking elements were placed laterally or longitudinally with respect to vehicle direction of travel.

Regarding claim 2, Parker teaches use of optical marking (col.2, lines 21-23).

Regarding claim 8, Parker teaches desirability of using coded road condition data (col. 3, lines 10-23 and col.3, line 46). Choosing to use well known digital coding would have been obvious, in order to ensure clear reception of received data signals.

2. Claims 3,4,5,6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parker in view of either Dyer et al, Yujiri et al., Nagai et al., Perreault et al. or Tominaga, respectively.

Parker discloses an automated vehicle guidance system as set forth above, except for specifically stating use of a particular marking .

Dyer teaches use of low frequency electrical marks (abstract), Yujiri teaches use of high frequency electromagnetic microwave marks (abstract), Nagai teaches use of magnetic marks (abstract), Perreault teaches use of acoustic marks (col. 2, lines 29-32), and Tominaga teaches desirability of use of hybrid marks (col.1, lines 26-34).

It would have been obvious to use well-known low frequency, high frequency, magnetic, acoustic or hybrid marks as suggested by Dyer, Yujiri, Nagai, Perreault or Tominaga, respectively, in order to obtain a automated guidance system which would not have been subject to error during low visibility conditions where an optical sensor might have been ineffective.

3. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Parker et al. in view of Yamashita et al. and Oda et al.

Oda teaches desirability of using an automated vehicle guidance system in conjunction with the internet (col.11, lines 25-26) and map data (col.12, lines 52-67), and Yamashita teaches desirability of using radar with an automated vehicle guidance system (col.3, lines 30-34).

It would have been obvious to utilize radar and internet with an automated vehicle guidance system as disclosed by Parker, in order to allow vehicles to travel safely in a platoon, and to obtain data from a remote source to aid in driving safety, such as road and weather hazards.

4. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Parker et al. in view of Iihoshi et al.

Iihoshi teaches desirability of using vehicle trains in an automated vehicle guidance system (abstract).

It would have been obvious to utilize vehicle trains in an automatic vehicle guidance system as disclosed by Parker, in order to make better utilization out of existing roadway space by permitting more vehicles to move safely over a given road space.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Higashi, How and Houskamp disclose automated vehicle guidance systems.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent A Swarthout whose telephone number is 703-305-4383. The examiner can normally be reached on M-F from 6:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Hofsass, can be reached on 703-305-4717. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Brent A Swarthout
Examiner
Art Unit 2636

**BRENT A. SWARTHOUT
PRIMARY EXAMINER**